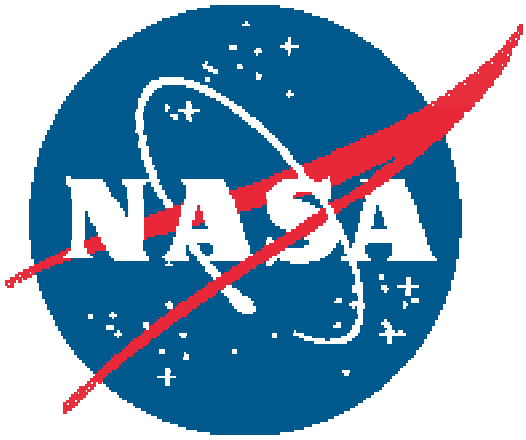

National Aeronautics and Space Administration **April 5, 2001**

BAA-01-OES-01

BROAD AGENCY ANNOUNCEMENT

OPPORTUNITIES FOR STATE, LOCAL, REGIONAL AND TRIBAL GOVERNMENTS TO UTILIZE NASA AND COMMERCIALLY DEVELOPED DATA AND CAPABILITIES IN OPERATIONS AND DECISION SUPPORT

Abstracts due - May 15, 2001
Proposals due – July 16, 2001

OMB Approval No. 2700-0087

OPPORTUNITIES FOR STATE, LOCAL, REGIONAL AND TRIBAL GOVERNMENTS TO UTILIZE NASA AND COMMERCIALLY DEVELOPED DATA AND CAPABILITIES IN OPERATIONS AND DECISION SUPPORT

NASA Broad Agency Announcement
Soliciting Applications Proposals
for
Period Ending
July 16, 2001

BAA-01-OES-01

Office of Earth Science
National Aeronautics and Space Administration
Washington, DC 20546

BROAD AGENCY ANNOUNCEMENT

OPPORTUNITIES FOR STATE, LOCAL, REGIONAL AND TRIBAL GOVERNMENTS TO UTILIZE NASA AND COMMERCIALLY DEVELOPED DATA AND CAPABILITIES IN OPERATIONS AND DECISION SUPPORT

A. INTRODUCTION

This Broad Agency Announcement (BAA), BAA-01-OES-01, is open in government fiscal year 2001 (FY2001) until May 15, 2001, for abstracts, and July 16, 2001, for proposals. Abstracts and proposals may be submitted at any time until the closing dates. In subsequent fiscal years, it is planned that submission and evaluation of abstracts will be conducted in two cycles as described in Section C.4. below. This BAA will be advertised in the Commerce Business Daily (CBD) and on the NASA Acquisition Internet Service (NAIS) Web site: http://procurement.nasa.gov/. The closing dates for abstract and proposal reviews will be posted in both the CBD and the above-specified Web site.

This announcement solicits projects that utilize geospatial information[1] derived from activities sponsored by the Earth Science Enterprise (ESE) of the National Aeronautics and Space Administration (NASA), commercial data, data products and services, or a combination of NASA/ESE and commercial capabilities, to improve decision-making and policy formulation in the operations of state, local, regional and tribal governments. The announcement reflects the belief of ESE that the evolving results of its Earth science investments, and data and expertise from the U.S. commercial sector, provide significant opportunities to benefit the governance and economy of the nation. It is anticipated that these projects will be *integrated applications partnerships* that include all the elements for an operational solution; e.g., data and product supply, data processors, government departments and the ultimate end user or decision-maker. Composition of the applications teams will depend on the requirements of the application, the capabilities of the user organization, and the geospatial information requirement(s). Participation from federal agencies other than NASA in the applications teams is not precluded, but the application team must be led by, and include direct participation from, the application user, i.e., the government entity at the state/local/regional/tribal level. Similarly, applications requirements should determine the project mix of public and commercial products and processes.

[1] For purposes of this announcement, "geospatial information" is defined as knowledge of the nature and distribution of physical and cultural features on the landscape based upon analysis of data from instruments on airborne and spaceborne platforms and, where appropriate, other types and sources of digital data.

The principal objective of this solicitation is to establish procedures employed operationally by user organizations. In that regard, proposals must include a plan for operational implementation of the application and a description of how successful applications can be propagated to other potential users. Rigorous evaluation of project experience, progress and results is a vital part of the program, and each proposal must reflect a commitment to this requirement. Proposals that describe purely technical demonstration projects will not be considered for funding.

Interested parties are invited to submit abstracts, i.e., preliminary proposals, to NASA at the address given in this announcement. Respondents whose abstracts are reviewed favorably will be asked to submit full proposals for further evaluation and funding consideration. Constituent elements of abstracts and proposals are described in Sections E and F, respectively. The term for NASA funding support will be no more than three years.

Note: *THIS ANNOUNCEMENT CONSTITUTES THE SOLICITATION – NO PAPER REQUEST FOR ABSTRACTS OR PROPOSALS WILL BE ISSUED.* Organizations interested in proposing should monitor the CBD and the NAIS for potential changes. *THIS ANNOUNCEMENT SHOULD NOT BE CONSTRUED AS A COMMITMENT BY NASA TO MAKE AWARDS IN ANY OF THE PROJECT THEME AREAS IDENTIFIED BELOW.*

B. PURPOSE

NASA/ESE is implementing an Applications Program to translate scientific and technical capabilities in Earth science into practical tools for public and private sector decision makers. This goal is part of the strategy of ESE to encourage and facilitate the realization of economic and social benefits from the nation's investment in Earth science information and technology.

A major objective of the ESE Applications Program is the development and implementation of applications that provide ongoing operational support to the user community. NASA will act as a catalyst for the development and adoption of methods and techniques that draw upon science, data and technology derived from ESE funded research and from commercial data, data products and industry capabilities. NASA, as a research and development organization, cannot provide funding to support the operational[2] requirements and services of other agencies or organizations. Operations will be funded by the user organization(s) and conducted exclusively by the user or in association with other public or private entities. The intention of this announcement is the implementation of on-going applications that create systemic change in the end-user

[2] In this announcement, "operational" is defined as the regular or routine use of geospatial information product(s), 1) to meet reporting requirements mandated by legislative or administrative action, and, 2) in decision support functions of an organization.

organization, lead to better informed decision making and increase productivity as measured in cost/time savings or cost avoidance. The initiative will also:

1) extend the benefits of NASA derived data, research and technology from global and national levels to state, local, regional and tribal levels;
2) support development of a robust remote sensing community involving public and private sector partners;
3) transfer remote sensing and associated technologies to the user community with the prime responsibility in the nation for resource management and related activities requiring geospatial information;
4) stimulate the use of commercial data, data products and operational capabilities by public sector organizations; and,
5) coordinate capture and dissemination of geospatial data at the state, local regional and tribal levels with national and global spatial data infrastructures.

This solicitation is not intended to support research projects that lack an operational goal or realistic plan to reach operational status.

Proposals should address one or more of the following application theme areas:

- Resource management
- Environmental assessment
- Community growth and infrastructure
- Disaster management

The application theme areas are described in Section I of this announcement.

ESE will conduct, periodically, informational workshops to increase communication and expand collaboration with and among the state, local, regional and tribal users and commercial providers. These workshops will serve to highlight successful projects, increase understanding by NASA and the commercial sector of concerns or barriers to the operational adoption of remote sensing data and information products, and help establish and support a robust national commercial industry by fostering a "pull" model (in which demand for data, products and services originate with the user community) for remotely sensed geospatial information by potential state, local, and tribal government users. The workshops will also facilitate the dissemination of information concerning technology advances, existing or new common products, successful pilot projects and opportunities for training and/or capacity building.

It is understood that successful development of applications under this solicitation may require non-NASA/ESE developed capabilities for data and product acquisition and processing. ESE will reimburse projects selected through this announcement for the cost of data and/or data products purchased from commercial suppliers and required for *application testing and implementation*[3] Cost of such data and data products should be indicated in the budget submitted with the proposal but will not be included in the project funding level cap listed in Section D. Respondents should note that *NASA will not*

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continue to reimburse users for the cost of data and data products after conclusion of the project term.

C. PROCESS AND SCHEDULE

Projects selected through this BAA will be awarded grants. Selections will be made through an "advisory down select process" defined as follows:

1) submittal of an abstract briefly describing the intended application and plan for operations;
2) upon favorable review of the abstract by ESE, submittal of a full proposal; and,
3) selection of proposals and awards following negotiations of grant terms and conditions.

Content guidelines for the abstracts and proposals are listed in Sections E. and F., respectively. *Submission of an abstract is **required**. A proposal received without prior submission of an abstract will not be considered.*

1. Abstracts

Abstracts may be submitted at any time. For consideration in FY2001, abstracts must be submitted by May 15, 2001. Abstracts submitted after the closing date for a review cycle (see Section C.4. below) will be reviewed in the next cycle.

2. Proposals

Full proposals will be requested for those projects whose abstracts are deemed responsive to the solicitation and likely to meet its operational goals. Notification of a positive review of an abstract will be by mail from ESE. Full proposals may be submitted at any time through July 16, 2001 for funding in FY 2001. *A request for a full proposal is not assurance that the project will be funded* but is an indication that the proposed work has merit, meets, prima facie, the requirements of the solicitation, and warrants further consideration. Proposals received after 4:30 PM,, July 16, 2001 will not be reviewed or considered prior to FY2002. Submitted proposals will be reviewed per the schedule indicated in Section C.4. below.

3. Address for submissions:

Abstracts and proposals should be sent to:

BAA Applications
NASA Peer Review Services, Code Y
500 E Street SW, Suite 200
Washington, DC 20024-2760

- Abstracts and proposals *must* be submitted by regular or overnight/express mail.
- **The identifier, BAA-01-OES-01, should be included on <u>all</u> submittals.**
- For overnight mail delivery purposes only, the recipient telephone number is (202) 479-9030.

4. Schedule summary

ESE anticipates re-issue of this BAA annually**. In FY2001, abstracts are due no later than 4:30 PM, EDT, May 15, 2001, and proposals are due no later than 4:30 PM, EDT, July 16, 2001.** In subsequent years, abstracts and/or proposals may be submitted at any time but will be evaluated in two cycles:

Abstracts:

- Closing dates for review of submitted abstracts will be 60 days and 120 days following publication of the announcement.
- Abstracts submitted more than 120 days following the publication date of the announcement will be reviewed in the next fiscal year.

Proposals:

- Closing dates for review of submitted proposals will be 150 and 210 days following the publication date of the announcement.
- Proposals submitted more than 210 days following the publication date of the announcement will be reviewed in the next fiscal year.

Abstracts and proposals will be due no later than 4:30 PM, local Eastern time, on the closing dates. Closing dates for the fiscal years after FY2001 will be posted on the NASA Acquisition Internet Service (NAIS) Web site: http://procurement.nasa.gov/, and in the CBD.

ESE will make every effort to select awards no later than 45 days following a closing date for submission of proposals.

D. PROJECT DURATION AND FUNDING

Preference for NASA support will be given to projects that achieve their pre-operational goals in the shortest possible period. In no event will NASA funding exceed three years (defined as 36 months from Award Date), and NASA's contribution will be reduced as the project progresses toward, and transitions to, operations. Maximum NASA funding for the first year will normally be limited to approximately $400,000 (not including the cost of commercial data or contributions from cooperators/partners in the applications project). Funding is subject to appropriations, but is unlikely that funding will exceed $5.0M per year for distribution among all awardees.

E. ABSTRACTS

1. Preparation

ESE receives many research proposals annually. Because of financial constraints, it is able to provide support for only a limited number of the proposals received. Acknowledging that the preparation of a research proposal represents a substantial investment of time and effort by the respondent, and, in an attempt to minimize this

burden, the Division is requiring organizations and individuals interested in submitting proposals under this solicitation to first submit an abstract describing the project.

The abstract, must be *no more than 5 pages*, single spaced, 12pt type. Not counted in the total pages are letters of commitment (optional from project partners). A template for the abstract is given below. Respondents should indicate which elements of the template, if any, are not applicable to the project.

Abstract Template

1. Application/project title
2. Project principal investigator or point of contact. Include name, address, phone number, fax number (if available) and email address (if available), organization, and position title.
3. Describe the application:
   a. the nature of the problem or opportunity, i.e., the *baseline* condition;
   b. what the application does;
   c. who the user(s) are;
   d. how the application will help meet mandated responsibilities and/or aid in decision support;
4. Describe the information product(s) generated for the application. Include:
   a. data sets (public and commercial) required to generate the information product(s);
   b. how the data product(s) will be generated.
5. Outline the operational concept (see definition of "operational" in Section B.), i.e., plan to incorporate the application in the operations of the user(s).
6. List anticipated cooperating organizations, agencies and companies
7. Identify anticipated contributions (cash and in kind) from non-NASA sources for data and information, application development and operations support.
8. Identify anticipated NASA contributions, other than data sets listed in #4 above, to the development of the application including:
   a. science, i.e., results from NASA sponsored research incorporated in the application process; and/or
   b. technology, i.e., data processing algorithms, interpretation techniques, etc., developed, or sponsored, by NASA and incorporated in the application process.
9. Anticipated funding request from NASA, by government fiscal year.

Respondents whose abstracts meet the evaluation criteria (see Section G.) will be requested to submit a full proposal.

2. Submission

Abstracts may be submitted at any time through 4:30 PM, EDT, May 15, 2001 for consideration in FY2001. Abstracts received late will not be evaluated before FY2002.

Send abstracts to: BAA Applications, NASA Peer Review Services, Code Y, 500 E Street SW, Suite 200, Washington, DC 20024-2760.

For overnight mail delivery purposes only, the recipient telephone number is (202) 479-9030. ***Submit one (1) original and five (5) copies of each abstract for each project proposed.***

In addition, and if possible, submit one electronic copy of the abstract in a format compatible with Microsoft Word (.DOC), Microsoft Excel (.XLW), or Adobe Reader (.PDF) as appropriate. Electronic submittal may be made on 1.4Meg floppy disk, 100Meg IOMEGA ZIP disk, or CD-ROM. The electronic version may also be submitted by email, as an attached file, to oesresponse@hq.nasa.gov*. Email submittals must include the BAA solicitation number in the "subject" line and title of the abstract and principal investigator in the text of the message.*

3. Evaluation

Abstracts will be evaluated based on the criteria listed in Section G. Results of the evaluation will be sent, in writing, to the points of contact identified in the abstracts. Respondents whose projects, based on the abstracts, appear to meet the criteria for applications and operations will be requested to submit full proposals. Respondents whose projects, based on the abstracts, are deemed unlikely to meet the goals of the BAA will be so advised.

F. PROPOSALS

1. Preparation
Respondents whose abstracts are accepted for further consideration will be contacted and requested to provide detailed proposals.

General instructions for preparation of proposals are listed in Appendix C. Specific instructions are included in this section.

Proposals may be no more than fifteen (15) pages of text, single-spaced, 12pt type. The page count includes references but does not include cover page, table of contents, facilities and equipment list, curriculum vitae for team members, letters of commitment from collaborators or detailed budget information. A template for the full proposal is given below. Respondents should indicate which elements of the template, if any, are not applicable to the project.

Proposal Template

1. Cover page. (See Appendix A)
2. Table of contents
3. Describe the application:
    a. A paragraph that characterizes the proposed project application within one or more of the Application Themes.
    b. The current situation as baseline for improvement.
    c. What the application does.
    d. Who the user(s) are.
    e. How the application will help meet mandated responsibilities and/or aid in decision support.
    f. What are the expected public and private benefits.
4. Describe the information product(s), processes and services necessary to support the application. Include:
    a. Data sets (public and commercial) required to generate the information product(s) and how the data sets will be acquired;
    b. Data processing steps, i.e., how the data product(s) will be generated.
5. List software, data processing algorithms, validation/verification and other procedures that need to be developed to generate the information product(s). Include a schedule for development, testing and implementation, if necessary. If the application includes distribution of data and information products to users, describe how such distribution will be accomplished and the steps taken to conform data and information access and distribution with the standards and protocols of the National Spatial Data Infrastructure (NSDI).
6. List the involved organizations, agencies and companies.
    a. Include names, addresses, and roles and responsibilities of each organization in application development and operations.

b. Describe the overall project management approach and list co-investigators and/or principal project staff from each participating organization. List names, organizations and position titles and responsibilities in application development and operations. Include biographical sketches and/or curriculum vitae, as appropriate.

7. Fully describe the process designed to incorporate the application into on-going operations. Identify who will be responsible for operations, how operations will be performed and funded initially, and on an on-going basis.
8. List facilities, equipment and other resources available for applications development and operations.
9. Describe NASA contributions, other than the data sets listed in #4 above, to the development of the application including:
   a. Science, i.e., results from NASA sponsored research incorporated in the application process; and/or
   b. Verification and validation;
   c. Technology, i.e., data processing algorithms, interpretation techniques, etc., developed by NASA
10. Budget summary (see form and instructions in Appendix A)
11. List project subtasks, schedule for completion and success criteria for tasks and project.
12. Evaluation and outreach - a plan for evaluating and communicating the results of the project. The plan should include a description of methods, techniques and resources devoted to evaluation and outreach. Evaluation techniques should include, at a minimum, tracking and measurement of change in the conditions that led to the project. Resources should be sufficient to track and measure project progress and outcome.
13. Letters of commitment from project participants. Each letter should include:
    a. Organization or company name;
    b. Identification of the application project and principal investigator;
    c. Description of the commitment of the organization, in cash or kind, during the duration of the application project and, if applicable, during operations.
14. Appendices (if applicable)

2. Submission

Proposals must be received by 4:30 PM, EDT, July 16, 2001 for consideration in FY2001. Proposals should be addressed to: BAA Applications, NASA Peer Review Services, Code Y, 500 E Street, Suite 200, Washington, DC 20024-2760. For overnight mail delivery purposes only, the recipient telephone number is (202) 479-9030. ***Submit one (1) original and five (5) copies of the proposal.***

In addition, and if possible, submit one electronic copy of the proposal in a format compatible with Microsoft Word (.DOC), Microsoft Excel (.XLW), or Adobe Reader (.PDF) as appropriate. Electronic submittal may be made on 1.4Meg floppy disk, 100Meg IOMEGA ZIP disk, or CD-ROM. The electronic version may also be submitted by email, as an attached file, to oesresponse@hq.nasa.gov.

Email submittals must include the BAA solicitation number in the "subject" line and title of the proposal and principal investigator in the text of the message.

3. Evaluation
Proposals will be evaluated by an expert panel and in accordance with the evaluation criteria identified in Section G. The proposal point of contact will be notified through email and surface mail When a final decision for award has been made.

G. EVALUATION AND SELECTION

1. Evaluation criteria
Abstracts and proposals submitted in response to this BAA will be evaluated according to the criteria specified in this section. Evaluations will be conducted and awards made per the schedule shown in Section C.4.

Abstracts and proposals will be evaluated on three elements - the nature and quality of the application, the adequacy and likely adoption of the plan for operations, and the completeness of the submission. The application will receive 50% of the evaluation weight, the plan for operations 40%. The evaluation and outreach plans will account for 10%. In addition, cost realism will be an unscored factor and will include a comparison of evaluated costs to available funds. Cost is significantly less important than all the other factors combined.

A. Application (50%)
Applications submitted in response to this solicitation must fall within one, or more, of the four theme areas described in Section I. The application will be evaluated in relation to the following reference criteria:

- **National Importance**
  The ESE seeks to maximize the benefit of its investment by selecting activities that address the most serious, far reaching, and important issues with regard to socioeconomic impact.
- **Pervasiveness**
  Problems or issues that are common across a region, state, tribe(s) or multiple local areas are preferred over issues that are specific to a single location or condition. In addition, persistent, long duration needs are placed above addressing short term conditions or events.
- **Uniqueness of NASA Contribution**
  ESE seeks projects that can not be addressed by other federal and state agencies, or in the commercial marketplace, and will not duplicate capabilities available from industry.
- **Partnership composition and Investment**

The contribution to a project from the non-NASA partners is an indication of commitment on their part, and will affect ESE decisions on which projects to select.

- **Cost/Benefit**
  ESE seeks to assure that the financial risk of a project is acceptable; that the investment is balanced with the potential cost savings or improved decision making of a successful result. ESE will pay careful attention to the affordability and practicality of the proposed solution.

- **Documentable Results**
  Every project must be managed to produce and report on outcome-based measures of success. This strategy means that the condition or problem must offer a baseline description and measure before the project, and comparable baseline afterwards. Problems that cannot be base-lined will be at a disadvantage in competition for ESE funding.

- **Commercial Impact**
  Projects that demonstrate a positive benefit for end user industries or commercial companies will be preferred over those with no apparent impact on the growth, development, maturity and global competitiveness of either economic end users or U.S. commercial industry

B. Plan for operations (40%)

The primary measure of success for the ESE Applications Program is the incorporation of proposed applications into the operations of user organizations. Consequently, the plan to transition applications from development to operations is a major element in the abstract and proposal and will be evaluated thoroughly. All projects must include the resources necessary to complete the project and continue the operation after the NASA funding cycle is complete. Important pre-operational evaluation elements in each project are the following:

1) A persuasive description of the reasons why the application has not been incorporated into operations and what the project will do to insure that the application is adopted
2) Commitment of the user, partner, and supporting organizations as indicated by their willingness to provide the support necessary for a reasonable chance of successful implementation and operation;
3) Competence and experience of the team members;
4) Identification of the data supplier (public or private); and
5) Cost and management aspects.

C. Evaluation and Outreach (10%)

Respondents should note that proposed project evaluation and outreach activities constitute 10% of the proposal evaluation score and should be treated thoroughly and thoughtfully. Overall guidance for proposal and project management evaluation, including requirements for government funded projects set forth in the Government Performance Results Act, is found in Appendix B

NASA/ESE and/or commercial capabilities are not required to be in an "operational" condition at the inception of the proposed application development. The plan should describe the current status of all elements required in the application and the plans by the application user, or a member of the application team, to have all required applications elements operational by the conclusion of the proposal term.

2. Selection
Abstracts and proposals received in response to this BAA will be reviewed and selected in accordance with the procedures stated in NASA FAR Supplement 1872.4 (http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm) as modified in this section. Evaluation panels will include representatives with technical and practical expertise in, 1) remote sensing and related technology; 2) commercial products from, and services for, Earth observation data; and, 3) geospatial applications at the state/local/regional/tribal government levels. Evaluation panels will meet and review submittals per the schedule given in Section C.5. and will assess the strengths and weaknesses of the abstracts and proposals based on the evaluation criteria and weights specified in this section. The panels will submit summary reports on each abstract and proposal to NASA Headquarters Office of Earth Science.

Key provisions concerning selections are given in Appendix C.

Respondents will be notified of the results of the evaluations of the abstracts and proposals as indicated in Sections E.3. and F.3. Respondents desiring additional information may contact the selecting official, indicated in Section K, for a de-briefing. De-briefings will occur following selection of proposals for the cycle (see Section C.4.) in which the abstract/proposal was submitted.

When a proposal is selected for award, negotiation and award will be handled by the procurement office in the funding installation. The proposal is used as the basis for negotiation. The contracting officer may request certain business data and may forward a model award instrument and other information pertinent to negotiation.

H. PROJECT IMPLEMENTATION AND MANAGEMENT

Projects funded through this BAA will be managed by the Remote Sensing Application Program at the Stennis Space Center, MS. Among other considerations that must be addressed after project selection, representatives from Stennis Space Center will negotiate with each selected project a plan for evaluation and outreach, including reporting responsibilities. The parties will settle on project performance metrics, including a baseline against which project progress and outcome can be measured. Subsequently, there will be a requirement for short quarterly reports based on a common format. There will be an annual meeting of project managers either at Stennis Space Center or Washington, DC, possibly in conjunction with appropriate national or regional

organizations, e.g., the National States Geographic Information Council (NSGIC), the Western Governors' Association, or the National Association of Counties (NACo).

Budgets submitted with proposals should include the estimated cost of travel to reviews, regular submission of performance metrics and outreach activities required by the program.

Given the focus in this BAA on applications for state/local/regional and tribal governments, and its intent to generate operational capabilities, the overall leadership of applications teams should reside with the state/local/regional/tribal organization implementing or using the application(s). It is recognized explicitly, however, that successful development projects are challenging and time consuming. Therefore, a state, local, or tribal project leader may delegate day to day project management responsibility to one or more of the public or commercial participants in the project.

I. APPLICATION THEME AREAS

NASA/ESE, drawing upon its experience in applications of Earth observations from aircraft and spacecraft and user comments obtained within the last two years in response to informational workshops on applications conducted by ESE, has identified four application theme areas of interest for the Application Program. Proposals submitted in response to this solicitation should focus on one or more of these themes:

- Resource management
- Environmental assessment
- Community growth and infrastructure
- Disaster management

Examples of topics within these themes are described below, but the topics list is not meant to be inclusive. Applications may address more than one theme, but are not required to do so, nor is there a competitive advantage in doing so. Questions regarding the appropriateness of specific application topics to the intentions of this solicitation should be addressed to the NASA points of contact listed in Section J.

1. Resource Management

Application areas under this theme address the assessment, monitoring and management of land and water resources. General areas include agriculture, forestry, rangeland, wildlife and fisheries, management of resources to maintain biodiversity, preservation of coastal zones and watersheds, the availability and use of fresh water, and non-renewable resource issues such as the exploration and extraction of minerals and petroleum. (The impact of these activities on the local or global environment is included in Environmental Assessments as defined in 2 below.) Examples of specific applications that fall within the theme of Resource Management and address, potentially, the requirements of this solicitation include the use of ESE developed science, technology understanding together with remote sensing data and related information to:

- assess agricultural crop distribution, monitor health, phenological state and invasion of unwanted plant species, develop yield prediction and other agronomic models, or support precision farming activities.
- assess forest conditions including monitoring health and well being, estimating standing timber volume, fire management, determine extent of damage from fires, insects and disease, and monitoring compliance of permit regulations.
- assess and monitor the use and condition of rangeland including status, weed infestation and monitoring regulated activities.
- determine biological richness of ecosystems being considered for preservation, monitoring the health and well being of protected areas, and monitor intrusion activities and permit regulations related to protected areas.
- assess and monitor conditions in coastal zone areas including health and well being of the ecosystem, development activities, impact on the ecosystem by natural disasters, pollution, climate change and sea level rise.
- assess and monitor the conditions in land use/land cover of watersheds including impact on the health and well being of the ecosystems by intrusion of development activities, natural disasters, pollution, climate change and human-induced changes.
- inventory and monitor the availability of fresh water resources, estimate and model the impact of regulatory changes in the use of fresh water resources, develop snow accumulation models for predicting the fresh water potential of snow packs, model and predict the impact of the predicted water supply on irrigated agriculture.
- assess petroleum, mineral and other natural geologic resources, measure and/or model their availability, monitor and/or assess their extraction, and assess the impacts of exploration and extraction methodologies.

Proposed activities may address issues at any geographic scale from site, to landscape, to region, so long as they relate directly to demonstrated operational requirements and to adoption by specific users. Applications may employ ESE science results and data directly to manage operations, or they may use ESE-derived models (e.g., El Niño/La Niña forecast) to adapt operations to future conditions.

The key to success for obtaining a funded proposal is to select an application that can be integrated from application research into an operational procedure to be implemented by a user whether from government, industry, or other organizations.

2. Environmental Assessment

Application topics under this theme address evaluation and monitoring of environmental variables that affect near term and long term physical, economic and social conditions. General topic areas include air and water quality; distribution, condition and change in terrestrial and aquatic ecosystems or environments and the variability of living organisms and the ecological complexes of which they are a part. In addition, environmental issues related to the health of human, plant, and animal communities are also included in this

theme area. Examples of specific applications that fall within the theme of environmental assessment and address the requirements of this solicitation include use of:

- ESE instrument data to monitor regional changes in air quality (e.g., atmospheric constituents and temperature) as input into regional planning models.
- data on extent of floods as input into procedure for monitoring extent and quality of ground water.
- remotely sensed data to monitor water temperature and vegetation to assess condition and change of estuarine environments.
- remotely sensed data to investigate and monitor changes in habitat, the spread of invasive species, or contamination resulting in impacts on biodiversity.
- remotely sensed data to monitor or contribute to environmental reporting requirements such as non-point source discharge to watersheds.
- remotely sensed data to monitor environmental parameters that affect the spread of infectious disease.

The key to success of these or similar applications in a proposal is the integration of the application into an *operational* procedure.

3. Community Growth and Infrastructure

Applications areas under this theme address human-induced land use and land cover change, transportation, infrastructure and utilities, conservation and preservation of cultural and recreational resources, urban planning, real estate and engineering/construction/development. Examples of specific applications that fall within the theme of Community Growth and Infrastructure and address, potentially, the requirements of this solicitation include the use of ESE developed science, technology and/or remote sensing data to:

- analyze the impact on the local environment of human-induced land use/land cover change associated with population centers including urban area heat island analysis
- map and monitor the evolving road, highway and rail networks and pipelines - monitor automobile, truck, barge, rail and shipping traffic – plan and locate new routes for pipelines, highways, railways and terminals - cost-surface analysis of new transportation routes
- plan, locate, develop and monitor gas, electric, water and telecommunications utilities infrastructure
- locate, preserve and conserve archaeological and cultural resources, historical sites and recreational facilities
- plan and monitor urban growth including correlative transportation infrastructure, cadastral mapping, and analysis within GIS utilizing satellite images as an input – may include real estate and engineering/construction/development applications

4. Disaster Management

For the purposes of this announcement, "disaster management" is defined as natural hazard/disaster-related activities in all phases of the disaster cycle, including preparedness, response, recovery, and mitigation. This encompass geological (e.g., volcanic eruptions, earthquakes, landslides) and meteorological (e.g., severe weather such

as hurricanes and tropical cyclones, tornadoes) hazards and their associated effects (e.g., tsunamis, coastal and river flooding, flash flooding, disease breakout, etc).

Application topics under this announcement shall include the use of NASA ESE science, data, and technology in the decision-making processes of Disaster Management by emergency managers, health officials, or other decision-makers. Projects may include:

- assessment of risk and vulnerability to natural hazards,
- observation and monitoring of natural phenomena that result in natural hazards and natural disasters,
- post hazard/disaster assessment as it relates to environmental or infrastructure damage, and
- assessment and understanding of the economic and societal consequences of natural hazards.
- understanding of the relationships and linkages between health and environment (including climate and natural hazards) and/or developing practical early warning systems for health issues.

The ultimate product of the work in Disaster Management should be new tools, processes, and/or procedures for emergency managers, health officials, and other decision-makers in state, regional, local, and tribal governments, better access to science/data/technology, and/or well packaged and easily understandable information products that can be utilized to take actions, in any portion of the disaster management or disease cycle.

J. NASA POINTS OF CONTACT

Questions regarding the contents and requirements of this solicitation and the status of submitted abstracts and proposals should be addressed to:

- For **Resource Management**:

Mr. Wayne Mooneyhan
USRA
Suite 801
300 D St. SW
Washington DC 20024
Tel: 202-479-2609
Fax: 202-358-2613
email: wmooneyhan@usra.edu

- For **Disaster Management**:

Mr. Timothy Gubbels
Code YO
300 E St. SW

Washington DC 20546
Tel: 202-358-0442
Fax: 202-358-2770
email: tgubbels@hq.nasa.gov

- For **Community Growth and Infrastructure**:

Dr. Bruce Davis
NASA/XA00
Bldg-1100
Stennis Space Center, Miss. 39529-6000
Tel: 228-688-1921
Fax: 228-688-7455
email: Bruce.Davis@ssc.nasa.gov

- For **Environmental Assessment and general inquiries**:

Mr. Edwin Sheffner
Code YO
300 E. St. SW
Washington DC 20546
Tel: 202-358-0239
Fax: 202-358-2770
email: esheffne@hq.nasa.gov

K. SELECTING OFFICIAL

The selecting official for this solicitation is:
Director, Applications Division
NASA Headquarters
Code YO
300 E. St. SW
Washington DC 20546

Please use identifier number BAA-01-OES-01 when making an inquiry regarding this Announcement. Your interest and cooperation in participating in this opportunity are appreciated.

Proposals submitted to NASA Headquarters will cause a delay in receipt of your proposal, therefore, please adhere to “Address for submissions” noted in Section C. 3.

ORIGINAL SIGNED BY

Ghassem R. Asrar
Associate Administrator
Office of Earth Science

APPENDIX A

PROPOSAL COVER PAGE, REQUIRED DECLARATIONS, AND BUDGET SUMMARY FORM AND INSTRUCTIONS

I. Proposal Cover Page

A. Requirements

A proposal cover page must be part of each proposal, but will not be counted against the page limit. The cover page must be signed by the Principal Investigator and an official, by title, of the investigator's organization authorized to commit the organization. *This authorizing signature also certifies that the proposing institution is in compliance with the three required certifications printed in full in Section II of this appendix.* The three certifications *do not* need to be submitted with the hard copy of the proposal.

Proposal Cover Page

NASA Broad Agency Announcement BAA-01-OES-01

Proposal No. _____ (Leave Blank for NASA Use)

Application Theme Area (Please check one or all that apply):

- Resource management _____
- Environmental assessment _____
- Community growth _____
- Disaster management _____

Title: _____

Principal Investigator:_____

Institution: _____

Street/PO Box: _____

City: _____ State: _____ Zip: _____

Country: _____ Congressional District:_____
(used for database sorting purposes only)

E-mail: _____

Telephone: _____ Fax: _____

Principal Investigator (Signature) _____

Co-Investigators:
Name Institution & E-mail

_____ _____

_____ _____

_____ _____

Budget (by government fiscal year, October 1 through September 30)
1st Fiscal Year: _____
2nd Fiscal Year: _____
3rd Fiscal Year: _____
4th Fiscal Year: _____
Total: _____

By submitting the proposal identified in this *Cover Page/Proposal Summary* in response to this Broad Agency Announcement, the Authorizing Official of the proposing institution (or the individual proposer if there is no proposing institution) as identified below:

- certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
- agrees to accept the obligations to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- confirms compliance with all provisions, rules, and stipulations set forth in the three Certifications contained in this BAA [namely, (i*) Certification of Compliance with the NASA Regulations Pursuant to Nondiscrimination in Federally Assisted Programs, (ii) Certifications, Disclosures, And Assurances Regarding Lobbying, and, (iii)) Certifications, Disclosures, And Assurances Regarding Debarment & Suspension*].

Willful provision of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

Title of Authorizing Institutional Official: _____

Signature: _____ Date: _____

Name of Proposing Institution: _____

Telephone: _____ E-mail:_____ Facsimile: _____

II. REQUIRED DECLARATIONS

1. ASSURANCE OF COMPLIANCE WITH THE NASA REGULATIONS PURSUANT TO NONDISCRIMINATION IN FEDERALLY ASSISTED PROGRAMS

The *(Institution, corporation, firm, or other organization on whose behalf this assurance is signed, hereinafter called "Applicant ")* hereby agrees that it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1972 (20 U.S.C. 1680 et seq.), Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and the Age Discrimination Act of 1975 (42 U.S.C. 16101 et seq.), and all requirements imposed by or pursuant to the Regulation of the National Aeronautics and Space Administration (14 CFR Part 1250) (hereinafter called "NASA") issued pursuant to these laws, to the end that in accordance with these laws and regulations, no person in the United States shall, on the basis of race, color, national origin, sex, handicapped condition, or age be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives federal financial assistance from NASA; and hereby give assurance that it will immediately take any measure necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of federal financial assistance extended to the Applicant by NASA, this assurance shall obligate the Applicant, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant for the period during which the federal financial assistance is extended to it by NASA.

This assurance is given in consideration of and for the purpose of obtaining any and all federal grants, loans, contracts, property, discounts, or other federal financial assistance extended after the date hereof to the Applicant by NASA, including installment payments after such date on account of applications for federal financial assistance which were approved before such date. The Applicant recognized and agrees that such federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign on behalf of the Applicant.

2. CERTIFICATIONS, DISCLOSURES, AND ASSURANCES REGARDING LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 14 CFR Part 1271, as defined at 14 CFR Subparts 1271.110 and 1260.117, with each submission that initiates agency consideration of such applicant for award of a Federal contract, grant, or cooperative agreement exceeding $ 100,000, the applicant must **certify** that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit a Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

3. CERTIFICATIONS, DISCLOSURES, AND ASSURANCES REGARDING GOVERNMENTWIDE DEBARMENT AND SUSPENSION

As required by Executive Order 12549, and implemented at 14 CFR 1260.510, for prospective participants in primary covered transactions, as defined at 14 CFR Subparts 1265.510 and 1260.117—

(1) The prospective primary participant **certifies** to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (l)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

III. Budget Summary

BUDGET SUMMARY

For period from _____ to _____

• Provide a complete Budget Summary for each year• Enter the proposed estimated costs in each Column.
• Provide as attachments detailed computations of all estimates in each cost category with narratives as required to fully explain each proposed cost. See *Instructions For Budget Summary* on following page for details.

	FY1	FY2	FY3	FY4	Total
1. Direct Labor (salaries, wages, and fringe benefits)					
2. Other Direct Costs:					
a. Subcontracts					
b. Consultants					
c. Equipment					
d. Supplies					
e. Travel					
f. Other					
3. Facilities and Administrative Costs					
4. Other Applicable Costs:					
5. SUBTOTAL--Estimated Costs					
6. Less Proposed Cost Sharing (if any)					
7. Total Estimated Costs					
8. Data Costs					
9. Total NASA Cost					

INSTRUCTIONS FOR BUDGET SUMMARY

General Instruction: Provide specific and complete data as requested below. When "Basis Of Estimate" is requested, this means provide the details and methodology used to determine the estimate. Costs on the Budget Summary Sheet with no supporting rationale or basis of estimate will be considered incomplete, and proposal scores will reflect this lack of supporting information. Cost data is **not** included in page count limitations.

1. Direct Labor (salaries, wages, and fringe benefits): Attachments should list the number and titles of personnel, amounts of time to be devoted to the grant, and fully-burdened rates of pay.

2. Other Direct Costs:
    a. Subcontracts: Attachments should describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting.
    b. Consultants: Identify consultants to be used, why they are necessary, the time they will spend on the project, and rates of pay (not to exceed the equivalent of the daily rate for Level IV of the Executive Schedule: <http://www3.opm.gov/oca/01tables/execses/html/01execsc.htm>, exclusive of expenses and indirect costs).
    c. Equipment: List separately. Explain the need for items costing more than $500. Describe basis for estimated cost. General purpose equipment is not allowable as a direct cost unless specifically approved by the NASA Grant Officer. Any equipment purchase requested to be made as a direct charge under this award must include the equipment description, how it will be used in the conduct of the basic research proposed and why it cannot be purchased with indirect funds. General purpose personal computers may not be included unless specifically approved by the NASA Grant Officer.
    d. Supplies: Provide general categories of needed supplies, the method of acquisition, and the estimated cost.
    e. Travel: Describe the purpose of the proposed travel in relation to the grant and provide the basis of estimate, including information on destination, number of days, and number of travelers.
    f. Other: Enter the total of direct costs not covered by 2a through 2e. Attach an itemized list explaining the need for each item and the basis for the estimate.

3. Facilities and Administrative (F&A) Costs: Identify F&A cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, and telephone number of the Federal agency official having cognizance. If unapproved rates are used, explain why, and include the computational basis for the indirect expense pool and corresponding allocation base for each rate.

4. Other Applicable Costs: Enter total explaining the need for each item.

5. Subtotal-Estimated Costs: Enter the sum of items 1 through 4.

6. Less Proposed Cost Sharing (if any): Enter any amount proposed. If cost sharing is based on specific cost items, identify each item and amount in an attachment.

7. Total Estimated Costs: Enter the total after subtracting items 6 and 7b from item 5.

8. Data Costs: Enter estimated cost of commercial data and public data sets. Include itemized list indicating type of data, from whom it will be purchased, quantity and cost.

9. Total NASA Cost: Sum of lines 8 and 9.

APPENDIX B

PROJECT PERFORMANCE METRICS

The Government Performance Results Act (GPRA) requires that all government funded projects report their accomplishments and the resulting impact these accomplishments have on the socio-economic well-being of society and the nation. To respond to this requirement, the applications projects funded through this BAA shall submit, as part of their Annual Progress Reports, or on an as required basis, Project Performance Metrics consisting of the following information:

Description:
Summary of the project written for an outside audience i.e., reader who is not intimately familiar with the technology, science, applications and techniques.

Project Work Location:
Geographic location where the work is actually being performed.

Inputs:
All the inputs that are needed to complete and carry out the project. This includes human and physical capital and materials required for the research and applications process. It describes the cost of doing business and includes: budget, number of researchers/teams, participating users, data required, and use of other assets e.g., ancillary data.

Outputs:
Immediate observable products of the research and applications activity. Describes the efficiency resulting from the use of the resources. Includes data sets and applications developed, models developed, number of presentations made, papers published, number of graduate students supported (if applicable), and other direct results of the project.

Outcome:
Longer term results to which the program contributes. Includes understanding gained, applications demonstrated, resulting programmatic decisions enabled as a result of these applications. Examples included outcome such as "the rate of growth of the northern forest was accurately measured for the first time."

Impact:
This section discusses the consequences of the program, including intended benefits and unintended positive results. Include a description of utility and socio-economic benefit to the end users/customers. This section answers questions such as: "Why were the results of the projects useful?" "How were they useful?" "How were the end results (i.e., applications and data products developed) used in decision-making?" "What kind of significant economic or policy consequence resulted from the project?" Most important, it answers the question, "So what?" and includes assessments such as new knowledge shared, cost saved, new applications or functions that were done that were not possible before. How did or would the results impact the public good or expanded commercialization of value-added Earth Science data?

APPENDIX C

INSTRUCTIONS FOR RESPONDING TO NASA BROAD AGENCY ANNOUNCEMENTS (BAA)

[Please see Section F. for specific instructions on preparing proposals for this Broad Agency Announcement]

(a) **General.**

(1) Proposals received in response to a NASA Broad Agency Announcements will be used only for evaluation purposes. NASA does not allow a proposal, the contents of which are not available without restriction from another source, or any unique ideas submitted in response to an BAA to be used as the basis of a solicitation or in negotiation with other organizations, nor is a pre-award synopsis published for individual proposals.

(2) A solicited proposal that results in a NASA award becomes part of the record of that transaction and may be available to the public on specific request; however, information or material that NASA and the awardee mutually agree to be of a privileged nature will be held in confidence to the extent permitted by law, including the Freedom of Information Act.

(3) A contract, grant, cooperative agreement, or other agreement may be used to accomplish an effort funded in response to an NRABAA. NASA will determine the appropriate instrument. Contracts resulting from BAAs are subject to the Federal Acquisition Regulation and the NASA FAR Supplement. Any resultant grants or cooperative agreements will be awarded and

administered in accordance with the NASA Grant and Cooperative Agreement Handbook (NPG 5800.1).

(4) NASA does not have mandatory forms or formats for responses to BAAs; however, it is requested that proposals conform to the guidelines in these instructions and Section F. of the BAA. NASA may accept proposals without discussion; hence, proposals should initially be as complete as possible and be submitted on the proposers' most favorable terms.

(5) **Restriction on Use and Disclosure of Proposal Information.** Information contained in proposals is used for evaluation purposes only. Offerors or quoters should, in order to maximize protection of trade secrets or other information that is confidential or privileged, place the following notice on the title page of the proposal and specify the information subject to the notice by inserting an appropriate identification in the notice. In any event, information contained in proposals will be protected to the extent permitted by law, but NASA assumes no liability for use and disclosure of information not made subject to the notice.

Notice
Restriction on Use and Disclosure of Proposal Information

The information (data) contained in *[insert page numbers or other identification]* of this proposal constitutes a trade secret and/or information that is commercial or financial and confidential or privileged. It is furnished to the Government in confidence with the understanding that it will not, without permission of the offeror, be used or disclosed other than for evaluation purposes; provided, however, that in the event a contract (or other agreement) is awarded on the basis of this proposal the Government shall have the right to use and disclose this information (data) to the extent provided in the contract (or other agreement). This restriction does not limit the Government's right to use or disclose this information (data) if obtained from another source without restriction.

(b) Project Description

(1) Management Approach. For large or complex efforts involving interactions among numerous individuals or other organizations, plans for distribution of responsibilities and arrangements for ensuring a coordinated effort should be described.

(2) Personnel. The principal investigator is responsible for supervision of the work and participates in the conduct of the research regardless of whether or not compensated under the award. A short biographical sketch of the principal investigator, a list of principal publications and any exceptional qualifications should be included. Omit social security number and other personal items which do not merit consideration in evaluation of the proposal. Give similar biographical information on other senior professional personnel who will be directly associated with the project. Give the names and titles of any other scientists and technical personnel associated substantially with the project in an advisory capacity. Universities should list the approximate number of students or other assistants, together with information as to their level of academic attainment. Any special industry-university cooperative arrangements should be described.

(3) Facilities and Equipment.

(i) Describe available facilities and major items of equipment especially adapted or suited to the proposed project, and any additional major equipment that will be required. Identify any Government-owned facilities, industrial plant equipment, or special tooling that are proposed for use. Include evidence of its availability and the cognizant Government points of contact.

(ii) Before requesting a major item of capital equipment, the proposer should determine if sharing or loan of equipment already within the organization is a feasible alternative. Where such arrangements cannot be made, the proposal should so state. The need for items that typically can be used for research and non-research purposes should be explained.

(4) Proposed Costs [See Appendix B for specific instruction on reporting costs for this BAA]

(i) Explanatory notes should accompany the cost proposal to provide identification and estimated cost of major capital equipment items to be acquired; purpose and estimated number and lengths of trips planned; basis for indirect cost computation (including date of most recent negotiation and cognizant agency); and clarification of other items in the cost proposal that are not self-evident. List estimated expenses as yearly requirements by major work phases.

(ii) Allowable costs are governed by FAR Part 31 and the NASA FAR Supplement Part 1831 (and OMB Circulars A-21 for educational institutions, A-122 for nonprofit organizations, and A-87 for state and local governments).

(iii) Use of NASA funds--NASA funding may not be used for foreign research efforts at any level, whether as a collaborator or a subcontract. The direct purchase of supplies and/or services, which do not constitute research, from non-U.S. sources by U.S. award recipients is permitted. Additionally, in accordance with the National Space Transportation Policy, use of a non-U.S. manufactured launch vehicle is permitted only on a no-exchange-of-funds basis.

(5) Security. Proposals should not contain security classified material. If the research requires access to or may generate security classified information, the submitter will be required to comply with Government security regulations.

(6) Current Support. For other current projects being conducted by the principal investigator, provide title of project, sponsoring agency, and ending date.

(7) Special Matters.

(i) Include any required statements of environmental impact of the research, human subject or animal care provisions, conflict of interest, or on such other topics as may be required by the nature of the effort and current statutes, executive orders, or other current Government-wide guidelines.

(ii) Proposers should include a brief description of the organization, its facilities, and previous work experience in the field of the proposal. Identify the cognizant Government audit agency, inspection agency, and administrative contracting officer, when applicable.

(c) Joint Proposals.

(1) Where multiple organizations are involved, the proposal may be submitted by only one of them. It should clearly describe the role to be played by the other organizations and indicate the legal and managerial arrangements contemplated. In other instances, simultaneous submission of related proposals from each organization might be appropriate, in which case parallel awards would be made.

(2) Where a project of a cooperative nature with NASA is contemplated, describe the contributions expected from any participating NASA investigator and agency facilities or equipment which may be required. The proposal must be confined only to that which the proposing organization can commit itself. "Joint" proposals which specify the internal arrangements NASA will actually make are not acceptable as a means of establishing an agency commitment.

(d) Late Proposals. Proposals or proposal modifications received after the latest date specified for receipt may be considered if a significant reduction in cost to the Government is probable or if there are significant technical advantages, as compared with proposals previously received.

(e) Withdrawal. Proposals may be withdrawn by the proposer at any time before award. Offerors are requested to notify NASA if the proposal is funded by another organization or of other changed circumstances which dictate termination of evaluation.

(f) Cancellation of BAA.

NASA reserves the right to make no awards under this BAA and to cancel this BAA. NASA assumes no liability for canceling the BAA or for anyone's failure to receive actual notice of cancellation.

END